

Expedited Processing
Application No. 10/651,824
Amd. Dated:
Reply to Final Office Action mailed August 28, 2006

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently presented): A device which is implantable in a body lumen surrounded by a lumen wall to block the flow of fluid in at least one direction through that body lumen, said device comprising:

a) a frame which is initially disposable in a collapsed configuration such that said device may be passed into the body lumen and subsequently expandable to an operative configuration wherein the frame assumes a generally cylindrical shape and exerts outwardly directed pressure against the such that the device engages the lumen wall to hold the device in a desired position within said body lumen; and,

b) a lumen blocking portion which is affixed to said frame, said lumen blocking portion being configured to form a continuous barrier that fully blocks the lumen of the blood vessel when the frame is in its operative configuration and the device is in the desired position within the body lumen, said lumen blocking portion being penetrable *in situ* by advancement of a penetrating member through the lumen blocking portion while the device is implanted within the body lumen.

Claim 2 (previously presented): The device of Claim 1 wherein the frame comprises a wire frame.

Claim 3 (previously presented): The device of Claim 1 wherein the frame comprises an inflatable member.

Claim 4 (previously presented): The device of Claim 1 further comprising projections which embed in the lumen wall.

Claim 5 (previously presented): The device of Claim 1 further comprising hooks which embed in the lumen wall.

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Claim 6 (previously presented): The device of Claim 1 further comprising an adhesive which adheres to the lumen wall.

Claim 7 (currently presented): The device of Claim 1 wherein the lumen blocking portion comprises a flexible cover that extends transversely over at least one end of the generally cylindrical frame when the device is in its operative configuration ~~frame comprises a plurality of members which are connected at a central location, and which emanate outwardly from said central location such that, when said frame is in its operative configuration, said elongate members will exert radial outward pressure against the lumen wall, said central location being further located and configured such that, when the device is implanted in a body lumen such that it blocks a flow of fluid through that body lumen, the resultant fluid pressure against said central location will cause said elongate members to exert greater pressure against the blood vessel wall.~~

Claim 8 (previously presented): The device of Claim 1 wherein lumen blocking portion comprises a component selected from the group consisting of: a membrane, a sponge, a fabric panel, a plug, a disc and a member that is sized to be transversely disposed within the body lumen.

Claim 9 (previously presented): The device of Claim 1 wherein said lumen blocking portion comprises an elastomeric membrane.

Claim 10 (previously presented): The device of Claim 1 wherein one side of said lumen blocking portion comprises a first material which is resistant to cellular ingrowth, and another side of said lumen blocking portion comprises a second material which is susceptible to cellular ingrowth.

Claim 11 (previously presented): The device of Claim 1 wherein said lumen blocking portion comprises a sponge.

Claim 12 (Original): The device of Claim 11 wherein said sponge is formed of a material selected from the group of materials consisting of:

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gel foam;
collagen;
polymeric foam material;
textile material; and,
woven fabric.

Claim 13 (previously presented) The device of Claim 1 wherein said lumen blocking portion comprises a disc.

Claim 14 (previously presented): The device of Claim 1 wherein said lumen blocking portion comprises a woven fabric member.

Claim 15 (previously presented): The device of Claim 1 wherein said lumen blocking portion is formed at least partially of a material which is penetrable by a penetrating member that is transluminally advanced through the body lumen, after the device has been implanted in the body lumen.

Claim 16 (currently amended): The device of Claim 1 wherein the frame blood vessel engaging portion of the device is radially contractible following implantation so as to disengage from the blood vessel wall, thereby facilitating removal of the device.

Claim 17 (Original): The device of Claim 16 wherein said device further comprises a connector formed on the device to facilitate connection of the device to a transluminally inserted retrieval instrument which is operative to pull the device in to an adjacent catheter.

Claim 18 (previously presented): The device of Claim 17 wherein the frame is constructed such that, when the retrieval instrument is attached to the connector and a pulling force is applied to the retrieval instrument, the blood vessel engaging portion of the device will be thereby caused to radially contract and disengage the blood vessel wall, thereby facilitating retraction of the device into the adjacent catheter.

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Claim 19 (previously presented): The device of Claim 1 wherein said frame is formed of a shape memory material which transitions to said operative configuration when warmed to body temperature, but which may be radially contracted *in situ* by bathing the device in a cooled liquid so as to cool the device to a shape memory transition temperature which is lower than body temperature.

Claim 20 (previously presented): The device of Claim 1 wherein said frame is formed of resilient self-expanding material which is biased to said operative configuration such that, when unconstrained, said device will resiliently self-expand to said operative configuration.